

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. - 8. canceled

9. (new): A computer-generated hologram comprising:

a plurality of cells,

the hologram having information recorded therein, said information operable to recreate a stereoscopic image of an object,

wherein at least one of said plurality of cells P_j having information related to a luminance TWL_{ci} (θ_{XY} , θ_{YZ}) of a virtual point light source Q_i from a plurality of virtual point light sources, the luminance corresponding to a point S on the object,

the point S being on a straight line between said one of the plurality of cells P_i and the virtual point light source Q_j .

10. (new): The computer-generated hologram according to claim 9, wherein a subset of the plurality of virtual point light sources together form a two-dimensional straight line light source.

11. (new): A computer-generated hologram, the hologram separating a viewing side and a side opposite to the viewing side, the hologram comprising:

a plurality of cells,

the hologram having information recorded therein, said information operable to recreate a stereoscopic image of an object,

the hologram being operable to receive reconstruction illumination light such that diffraction light is reconstructed,

the diffraction light diverging from a plurality of virtual point light sources on the side of the hologram that is opposite to the viewing side;

a luminance $TWL_{ci}(\theta_{XY}, \theta_{YZ})$ of the diffraction light from the virtual points being equal to a luminance of light from a point S on the object.

12. (new): The computer-generated hologram according to claim 11, wherein a subset of the plurality of virtual point light sources together form a two-dimensional straight line light source.

13. (new): A computer-generated hologram, the hologram separating a viewing side and a side opposite to the viewing side, the hologram comprising:

a plurality of cells,

the hologram having information recorded therein, said information operable to recreate a stereoscopic image of an object,

the hologram being operable to receive reconstruction illumination light such that diffraction light is reconstructed,

the diffraction light converging on a plurality of virtual condensing points on the viewing side of the hologram;

a luminance $TWL_{ci}(\theta_{XY}, \theta_{YZ})$ of the diffraction light being equal to a luminance of light from a point S on the object.

14. (new): The computer-generated hologram according to claim 13, wherein a subset of the plurality of condensing light points together form a two-dimensional straight line condensing light line.

15. (new): A computer-generated hologram, the hologram separating a viewing side and a side opposite to the viewing side, the hologram comprising:

a plurality of cells,

the hologram having information recorded therein, said information operable to recreate a stereoscopic image of an object,

the hologram being operable to receive reconstruction illumination light such that diffraction light is reconstructed,

the diffraction light diverging from a plurality of virtual point light sources on the viewing side of the hologram;

a luminance $TWL_{ci}(\theta_{XY}, \theta_{YZ})$ of the diffraction light from the virtual points being equal to a luminance of light from a point S on the object.

16 (new): The computer-generated hologram according to claim 13, wherein a subset of the plurality of condensing light points together form a two-dimensional straight line condensing light line.

17. (new): A method of generating a hologram capable of recreating a stereoscopic image of an object, the hologram separating a viewing side and a side opposite to the viewing side, the method comprising:

creating a plurality of cells on the hologram, one of said plurality of cells being P_j ;

designating a plurality of virtual point light sources such that one of said plurality of virtual point light sources Q_i corresponds to a point S on the object, the point S being on a straight line between Q_i and P_j ;

generating a luminance $TWL_{ci}(\theta_{XY}, \theta_{YZ})$ of Q_i such that the luminance corresponds to a luminance of S ; and

recording an information in the cell P_j corresponding to the luminance $TWL_{ci}(\theta_{XY}, \theta_{YZ})$.

18. (new): The method of claim 17, wherein a subset of the plurality of virtual point light sources together form a two-dimensional straight line light source.

19. (new): A method of generating a hologram capable of recreating a stereoscopic image of an object, the hologram separating a viewing side and a side opposite to the viewing side, the method comprising:

designating a plurality of virtual point light sources on a side of the hologram opposite to a viewing side;

producing diffraction light diverging from the plurality of virtual point light sources, the luminance $TWL_{ci}(\theta_{XY}, \theta_{YZ})$ of the diffraction light from the virtual points being equal to a luminance of light from a point S on the object; and

recording information on the hologram to recreate a stereoscopic image of the object.

20. (new): The method of claim 19, wherein a subset of the plurality of virtual point light sources together form a two-dimensional straight line light source.

21. (new): A method of generating a hologram capable of recreating a stereoscopic image of an object, the hologram having a viewing side and a side opposite to the viewing side, the method comprising:

designating a plurality of condensing points of light on a viewing side of the hologram;

producing diffraction light converging on the plurality of condensing points, the luminance $TWL_{ci}(\theta_{XY}, \theta_{YZ})$ of the diffraction light from the virtual points being equal to a luminance of light from a point S on the object; and

recording information on the hologram to recreate a stereoscopic image of the object.

22. (new): The method of claim 20, wherein a subset of the plurality of virtual point light sources together form a two-dimensional straight line light source.